

**Course Objectives:**

The course on Survey Methodology and Scale Development typically aims to equip students with the knowledge and skills necessary to design, conduct, and analyse surveys effectively. Here are some common objectives for such a course:

1. To learn the principles of creating effective surveys, including question formulation, survey structure, and sampling methods.
2. To gain insights into various data collection methods, such as online surveys, face-to-face interviews, and telephone surveys.
3. To understand the process of developing reliable and valid measurement scales, including item generation, factor analysis, and reliability testing.
4. To study how to analyse survey data using statistical software and interpret the results to make informed decisions.
5. To the ethical issues related to survey research, including informed consent, confidentiality, and data protection
6. To develop and validate the scale of measures by examining their reliability and validity.

**Learning Outcomes:**

1. Create well-structured surveys with clear, unbiased questions tailored to the research objectives.
2. Implement Data Collection Methods: Utilize various data collection techniques, understanding their advantages and limitations.
3. Develop Reliable Scales: Construct and validate measurement scales, ensuring they are reliable and valid through statistical methods like factor analysis.
4. Analyse Survey Data: Use statistical software to analyse survey data, interpret the results, and draw meaningful conclusions.
5. Address Ethical Issues: Recognize and address ethical considerations in survey research, including issues of consent, confidentiality, and data integrity.
6. Apply Theoretical Knowledge: Integrate theoretical concepts with practical applications in real-world survey research scenarios.

**Introduction:**

Survey Methodology and Scale Development is a crucial field in research that focuses on designing, conducting, and analysing surveys to gather data. This course covers the principles of creating effective

surveys, including question formulation, sampling methods, and data collection techniques. It also delves into the development of reliable and valid measurement scales, ensuring that the data collected is accurate and meaningful. Students learn to use statistical software for data analysis and address ethical considerations in survey research. This knowledge is essential for conducting robust research in various fields, from social sciences to market research

### **Unit 1 -Survey Process**

Survey Research-Definition of Terms-The Survey Process-Survey Design-Sample Selection-Sample Size-Degree of Precision-Statistical Power-Effect Size as a Determinant of Power -Sample Size as a Determinant of Power-Access to Subjects-Stratification and Clustering-Units of Analysis-Choice of Survey Media-Written Surveys- Verbal Surveys -Mixed Mode Surveys- Theory and applications of sample survey planning and design for conducting research. Survey design and planning, sampling, and data collection procedures

### **Unit 2- Survey Instrument Development and sampling techniques**

Survey Instrument -Development-Standards for Good Survey Questions-Question Wording-Feasible and Ethical-Additional Considerations-Biased Wording-Biased Context.-General Characteristics-Cognitive Implications of Biased Context-Facets of Biased Context- Simple random sampling; sampling proportions; estimation of sample size; stratified random sampling; ratio estimators; regression estimators; systematic and cluster sampling-Sample Size Estimation techniques

### **Unit 3-Design of Questionnaire**

Types of Survey Questions- Closed-ended Questions-Questions that Describe and Evaluate People, Places and Events-Questions that Measure Responses to Ideas, Analyses or Proposals-Questions that Measure Knowledge-Subjective Responses to Survey Questions- Cognitive Tasks Required for Survey Response-Sources of Measurement Error-Survey Execution-Data Analysis and Reporting Survey Results Over

### **Unit 4-Scaling -General Perspectives of Measurement**

Historical Origins of Measurement in Social Science -The Role of Measurement in the Social Sciences-Understanding the Latent Variable-Constructs Versus Measures -Latent Variable as the Presumed Cause of Item Values-Path Diagrams -Further Elaboration of the Measurement Model -Parallel Tests -Alternative Models

### **Unit 5-Scaling-Reliability and Validity**

Reliability-Continuous Versus Dichotomous Items-Internal Consistency-Reliability Based on Correlations between Scale Scores -Generalizability Theory - Validity -Content validity-Criterion-Related Validity-Construct Validity- Face Validity-Nomological Validity-Internal and External Validity with Measures

## Unit 6- Steps in Scale Development

Steps in Scale Development –Determine clearly what to be measured-: Generate an Item Pool-Determine the Format for Measurement - Have the initial Pool reviewed by the expert- Consider Inclusion of Validation Items.

### Reference books

- 1.The SAGE Handbook of Survey Methodology by Christof Wolf ,Dominique Joye, Tom W Smith & Yang-chih Fu
- 2.Survey Methodology, 2nd Edition, Robert M. Groves, Floyd J. Fowler Jr., Mick P. Couper, James M. Lepkowski, Eleanor Singer, Roger Tourangeau,ISBN: 978-0-470-46546-2,July 2009
3. Survey Research Methods (Applied Social Research Methods Book 1) 5th Edition, Kindle Edition by Floyd J. Fowler (Author)
4. Fundamentals of Survey Research Methodology April 2005 Priscilla A. Glasow
5. Scale Development, Theory and Applications, Fifth Edition, Robert F. DeVellis - The University of North Carolina at Chapel Hill, USA Carolyn T. Thorpe - The University of North Carolina at Chapel Hill, USA
6. Handbook of Survey Methodology for the Social Sciences, Lior Gideon, Springer Science & Business Media, 2012
7. Designing and Conducting Survey Research: A Comprehensive Guide, Louis M. Rea and Richard A. Parker, John Wiley & Sons, 2014
- 8.Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, Don A. Dillman, Jolene D. Smyth, and Leah Melani Christian,John Wiley & Sons, 2014

<b>Grading Policy:</b> Assignments, Critical Review Analysis, Internal Exam	Date Due	% of Grade
<b>Assignment 1:</b> Write a Survey Research note by choosing a topic and identifying a sampling framework and sampling units.	September 27,2024	5

<p><b>Statistical Technique:</b> Justify Population and sample ratio, statistical power, alpha, sensitivity using Gpower.</p>		
<p><b>Assignment 2:</b>  <b>Questionnaire Design:</b> Create a questionnaire aimed at assessing “.....”Related to your research domain (e.g., Likert scale, multiple-choice, open-ended).  <b>Pretesting:</b> Design a pretest for your questionnaire from the above. Describe how you would select participants and what specific feedback you would seek.  <b>Survey Question Types:</b> Create a table that categorizes various types of survey questions (e.g., dichotomous, ordinal, interval) along with their appropriate uses.  <b>Statistical Technique:</b> Conjoint Analysis, Text analytics</p>	<p>October 26,2024</p>	<p>5</p>
<p><b>Assignment 3:</b>  <b>Question Wording:</b> Take a poorly worded survey question and rewrite it to improve clarity and reduce bias. Explain the changes made.  <b>Data Collection Methods:</b> Compare and contrast two data collection methods (e.g., online surveys vs. face-to-face interviews). Discuss situations where one might be preferred over the other.  <b>Ethics in Surveys:</b> Write a brief essay on ethical considerations in survey research, including informed consent and confidentiality.  <b>Statistical Technique:</b> Apply Convergent Validity check here comparing data points and outcome.</p>	<p>November 30,2024</p>	<p>5</p>
<p><b>Assignment 4:</b>  <b>Survey Implementation:</b> Plan a small-scale survey project, detailing the objectives, target population, sampling method, data collection method, and timeline.  <b>Analyzing Survey Data:</b> Given a hypothetical/may even primary dataset from your questionnaire, perform basic statistical analyses descriptive and simple inferential on one of the questions and interpret the results.  <b>Survey Bias:</b> Identify potential sources of bias in</p>	<p>December 15,2024</p>	<p>5</p>

<p>survey research (e.g., response bias, selection bias). Provide examples of how these biases can affect results.</p> <p><b>Statistical Technique:</b> Apply Horman's test for common bias, t test, Regression(if possible)</p>		
<p><b>Assignment 5:</b></p> <p><b>Item Generation:</b> Develop an initial item pool for a new scale measuring ".....relevant to your subject of study...." Justify your choice of items based on theoretical frameworks.</p> <p><b>Psychometric Analysis:</b> Choose a scale (e.g., Likert scale) and outline the steps you would take to assess its reliability and validity using hypothetical data.</p> <p><b>Questionnaire:</b> Design a new Questionnaire/even if the tested one in the above assignment (if applicable can be used) to refine items for your "....." scale. Outline the key questions.</p> <p><b>Factor Analysis:</b> Explain what factor analysis is and how it can be used in scale development. Provide an example of when it would be appropriate to use this technique.</p> <p><b>Scale Revision:</b> After conducting a pilot test of your "....." scale, analyze the responses and propose revisions to improve the scale's clarity and effectiveness.</p>	<p>December 29,2024</p>	<p>5</p>
<p><b>Assignment 6:</b> A working paper on Development, Measurement and Validation of Scale.</p> <p><b>Statistical leads</b></p> <ol style="list-style-type: none"> <li>1.Applying unidimensional analysis,</li> <li>2.EFA, CFA</li> <li>3.Nomological validity</li> <li>4.Face validity</li> <li>5. Content validity with proper score card</li> <li>6. Higher order SEM to validate the scale</li> </ol>	<p>January 11,2025</p>	<p>5</p>

<b>Presenting Working paper on Development, Measurement and Validation of Scale with "Why, What, When, How" framework</b>	January 17,2025	20
Internal Exam :50 Marks	November 9,2024	30

<b>S.No</b>	<b>Mode</b>	<b>Marks</b>
1	Internal Assignments-40 Internal Exam-60 (100 will be converted to 50 marks)	50
2	External	50